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Defense Information Infrastructure (DII)

Common Operating Environment (COE)

Version 3.0.0.6

Kernel Installation Guide (Windows NT 4.0)

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Preface

The following conventions have been used in this document:

[HELVETICA FONT]	Used to indicate keys to be pressed. For example, press [RETURN].
Courier Font	Used to indicate entries to be typed at the keyboard, Windows NT commands, titles of windows and dialog boxes, file and directory names, and screen text. For example, execute the following command: A:\setup.exe
"Quotation Marks"	Used to indicate prompts and messages that appear on the screen.
<i>Italics</i>	Used for emphasis.

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1. Introduction

This document provides information and guidance needed for proper installation of the Windows NT Operating System Version 4.0 and the Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Version 3.0.0.6 for Windows NT 4.0.

The Windows NT Setup program prepares Windows NT to run on your computer. The Setup program copies the appropriate files onto your computer's hard disk and then configures the software needed to run applications and to use the network. In addition, the Setup program guides you through the installation steps and provides system Help for any step where you may need assistance.

Before you run the Setup program, you should note the system and media requirements listed in Section 1.1, *System Requirements*, and answer the questions about the installation listed in Section 1.2, *Installation Preparation*.

1.1 System Requirements

This section describes DII COE system requirements for the Windows NT Operating System 4.0.

1.1.1 Hardware Components

The following hardware components are required. The software may reside on a single hard disk or across multiple hard disks.

- C **Personal computer.** An 80486 personal computer or higher.
- C **Memory.** At least 16 megabytes (MB) of random access memory (RAM) (12 MB minimum is required for Windows NT).
- C **Source devices.** A CD-ROM drive to load the operating system; a 3.5-inch high density floppy drive to load the software.
- C **Disk space for swap space and temporary files.** Recommend 125 MB minimum free hard disk space to provide sufficient swap space and room for temporary files.
 - Windows NT 4.0 Operating System—125 MB
 - DII COE runtime files—5 MB
 - Swap space and temporary files—40 MB (recommended)
 - DII COE Tools—2 MB (developers only).

- Ⓒ **Disk space for segments and data.** Recommend 500 MB free hard disk space for segments and data.

1.1.2 Operating System Component

The following Windows NT Operating System component is required:

- Ⓒ Windows NT 4.0 Operating System CD-ROM.

1.2 Installation Preparation

The following questions must be answered before you install the Windows NT Operating System and the DII COE Kernel. Your system administrator should provide you with the appropriate answers.

1. What kind of display adapter card is installed in your computer?
 - Ⓒ How much video RAM is installed?
 - Ⓒ What is your monitor's refresh rate?
 - Ⓒ What resolution do you plan to use on your display (e.g., 1024 x 768, 800 x 600)?
 - Ⓒ What color depth do you plan to use on your display (e.g., 256 colors, 65536 colors)?
2. Does the computer have a network adapter card? If so,
 - Ⓒ What type of network adapter does your computer have?
 - Ⓒ What is the network adapter card's interrupt request number (IRQ)?
 - Ⓒ What is the base input or output (I/O) address?
3. Will the computer use a network? If so,
 - Ⓒ What is the name of the computer?
 - Ⓒ What is the name of the workgroup or the domain that the computer will join?
4. Is there a Dynamic Host Configuration Protocol (DHCP) server?
 - Ⓒ If so, what is the network address of the DHCP server?
 - Ⓒ If not, what is your computer's Internet Protocol (IP) address and network mask?
5. Is the computer using Domain Name Service (DNS)? If so,

- C What is the computer's domain name?
- C What is the IP address of the DNS server?
- 6. Is a printer connected directly to the computer? If so,
 - C What is the name of the printer?
 - C What is the printer model?
 - C What port does the printer use?
- 7. What is the server clock time?
- 8. What should the administrator's password be?

1.3 Additional Sources of Information

Reference the following documents for more information about the DII COE and Microsoft Windows NT:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 2.0*, DII COE I&RTS:Rev2.0, Inter-National Research Institute, October 23, 1995
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.0.0.6 Programming Guide (Windows NT 4.0)*, DII.3006.NT40.PG-1, Inter-National Research Institute, February 5, 1997
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.0.0.6 System Administrator's Guide (Windows NT 4.0)*, DII.3006.NT40.AG-1, Inter-National Research Institute, February 5, 1997
- C *Microsoft Windows NT Workstation Installation Guide*, Microsoft Corporation, 1994.

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2. Installing the Windows NT Operating System

The Windows NT Operating System is distributed by Microsoft. Complete instructions for installing the operating system are provided in the *Microsoft Windows NT Workstation Installation Guide*, which should accompany the software.

This section supplements the *Microsoft Windows NT Workstation Installation Guide* to include instructions specific to the DII COE configuration. Even if the Windows NT Operating System is already installed on your computer, you still should review this section to ensure that the operating system is configured properly for the DII COE.

The following are recommendations for installing the Windows NT 4.0 Operating System for the DII COE:

Setup Options

- Ⓒ It is recommended that you select the `Typical Setup` option unless you have prior experience installing the Windows NT Operating System.

Partitioning the Hard Disk

- Ⓒ If you choose to create a new partition for Windows NT, it is recommended that you partition the entire drive for the Windows NT Operating System.
- Ⓒ The DII COE can only be installed on an NT file system (NTFS). If you are creating a new partition for Windows NT, you must format it using NTFS.

General Configuration

- Ⓒ It is recommended that you install the Windows NT system files in the default directory, `\WINNT`.

Networking

- Ⓒ Windows NT supports multiple network protocols. It is recommended that you enable Transmission Control Protocol/Internet Protocol (TCP/IP) transport as a minimum. You may enable additional protocols, if desired.
- Ⓒ To avoid confusion, your computer name should be the same as your TCP/IP host name. If you are unsure of your TCP/IP host name, contact your system administrator.

Miscellaneous

- C When creating new accounts, remember that passwords are case sensitive. If you have difficulty entering your password, verify that the [CAPS LOCK] key is turned off.
- C It is recommended that you wait until the entire installation is finished before changing the display settings. Use the `Display` icon in the `Control Panel` to change your video configuration after running the Setup program.
- C It is recommended that you create an emergency repair floppy diskette. This repair floppy diskette must be updated each time you change your system configuration (e.g., network card, video display).

Service Packs

- C Windows NT service packs are released intermittently to correct problems with the Windows NT Operating System. Each service pack contains corrections from all previous service packs.
- C No service pack is installed during the normal Windows NT Version 4.0 Operating System installation. Service packs are distributed in several formats including CD-ROM and compressed archived files available via the Internet. To install a service pack, run `update.exe`. The location of this file may vary by distribution media. The `update.exe` file is usually found under the `1386` directory on most distributions. Certain service packs also may be available on separate disk sets as part of a DII distribution.

3. Installing the DII COE Kernel for Windows NT

The DII COE Kernel for Windows NT consists of DII COE runtime files. The DII COE Kernel Installer performs the following actions: (1) Loads the DII COE runtime files onto the user's hard drive and (2) configures the DII COE for the user's computer.

WARNING: This automated installation procedure is called a *destructive installation* because installation removes the registry entries for any previously installed segments. Segments that are part of the kernel installation *will* be overwritten.

Follow the steps below to install the DII COE Kernel for Windows NT Version 4.0.

STEP 1: Insert the first installation floppy diskette and run the installation executable file. Place the first DII COE installation diskette in drive A:. Click on the Start button on the Windows NT taskbar and click on the Run... option. The Run window appears. Type A:\setup.exe in the Open field and click on the OK button. The DII COE Kernel Installer logo appears, and then the Welcome window appears (Figure 1). Read the text in the window and click on the Next button to continue the installation.

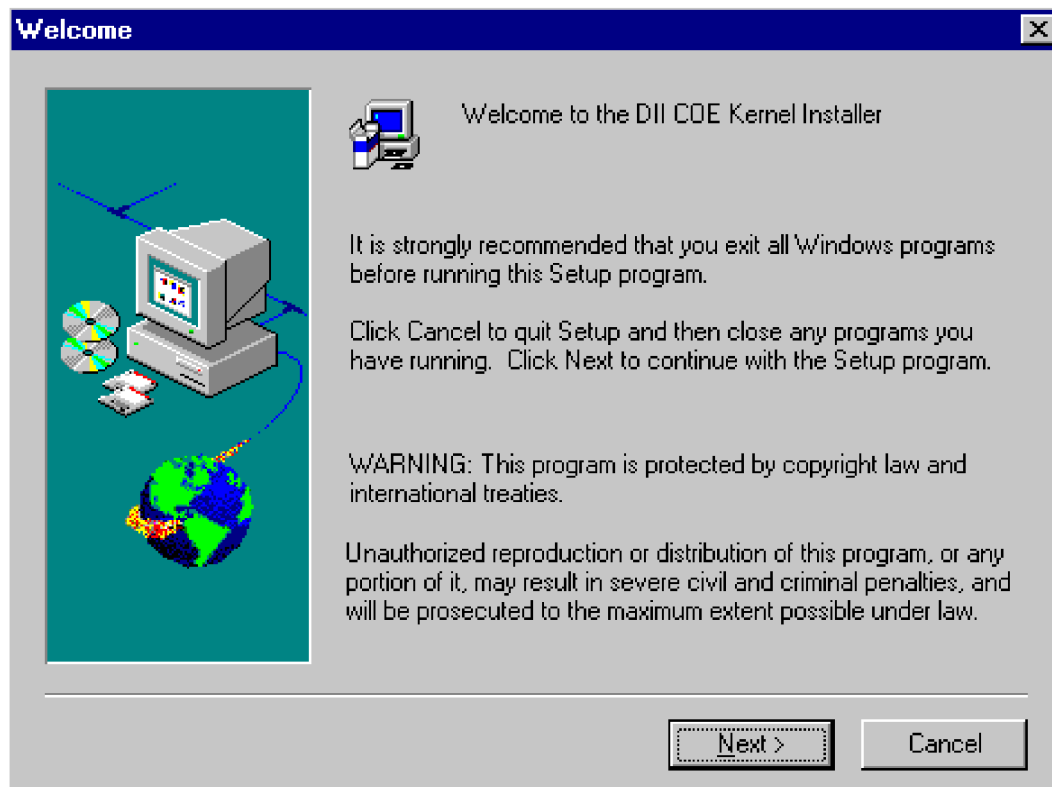


Figure 1. Welcome Window

STEP 2: Acknowledge that the installation procedure removes any previously installed segments' registry entries and decide if you want to continue. If a previous version of the DII COE Kernel is loaded on the machine, a dialog box appears with the following message. If this dialog box does not appear, proceed to STEP 6.

```
This is a destructive kernel load! Segments already
installed will lose their registry entries. Segments
which are part of the kernel installation (COE,
SysAdm, and WINNT) will automatically be replaced.
Do you wish to continue?
```

As this message states, segments that are part of the kernel installation, such as the System Administration segment, the COE segment, and the Windows NT COTS segment, will be replaced. In addition, registry entries for segments that are already installed will be removed.

If you want to proceed with the installation, click on the `Yes` button. If you want to cancel the installation, click on the `No` button.

STEP 3: Determine if you want to deinstall existing segments using the DII COE Installer. The following prompt appears:

```
During the kernel installation, you will be given the
option to delete installed segments (not a complete deinstall).
It is recommended that you exit and use the DII COE Installer
to deinstall them properly.
Do you wish to continue?
```

As stated in this message, the kernel installation program allows you to delete segment directories that were installed on previous versions of the DII COE Kernel. Deleting segments this way will only delete the segment directories, rather than perform all appropriate deinstallation processing. Therefore, if the segments should be removed from the machine, it is recommended that you use the DII COE Installer to perform a proper deinstallation before loading the DII COE Version 3.0.0.6 Kernel. Permanent segments cannot be deinstalled with the DII COE Installer. Permanent segments must be deleted during the kernel installation, as described in STEP 4.

If you want to proceed with the installation, click on the `Yes` button. If you want to cancel the installation, click on the `No` button.

STEP 4: Choose segments to delete from disks. The following installation prompt appears for each individual segment directory:

Do you wish to delete the [drive:name of segment directory]
directory?

If the segment directory should not be deleted from the disk, click on the **No** button. If the segment directory should be deleted, click on the **Yes** button.

If you do not choose to delete one or more segment directories, the segment(s) will remain on disk but will no longer appear in the **Currently Installed Segments** panel of the **DII COE Installer** window.

STEP 5: Choose whether or not to delete the \h\USERS directory. The following installation prompt appears for the \h\USERS directory:

Do you wish to delete the [drive:]\h\USERS directory?

This directory may contain data from previously installed segments. If you chose to delete all of the segment directories in STEP 4, you also should delete the \h\USERS directory. If the directory should not be deleted from the disk, click on the **No** button. If the directory should be deleted, click on the **Yes** button.

STEP 6: Select the destination drive. The **Select the DII Drive** window appears (Figure 2). Click on the appropriate destination drive toggle for the DII COE (i.e., **Drive C**, **Drive D**, or **Drive E**) and then click on the **Next** button. A status bar shows the progress of the installation.

NOTE: The destination drive must be an NTFS-formatted disk.
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STEP 7: Exit the installation program. The **DII COE Kernel Installer** window appears. This window indicates that the DII COE Kernel has been installed. Click on the **Finish** button to exit the program.

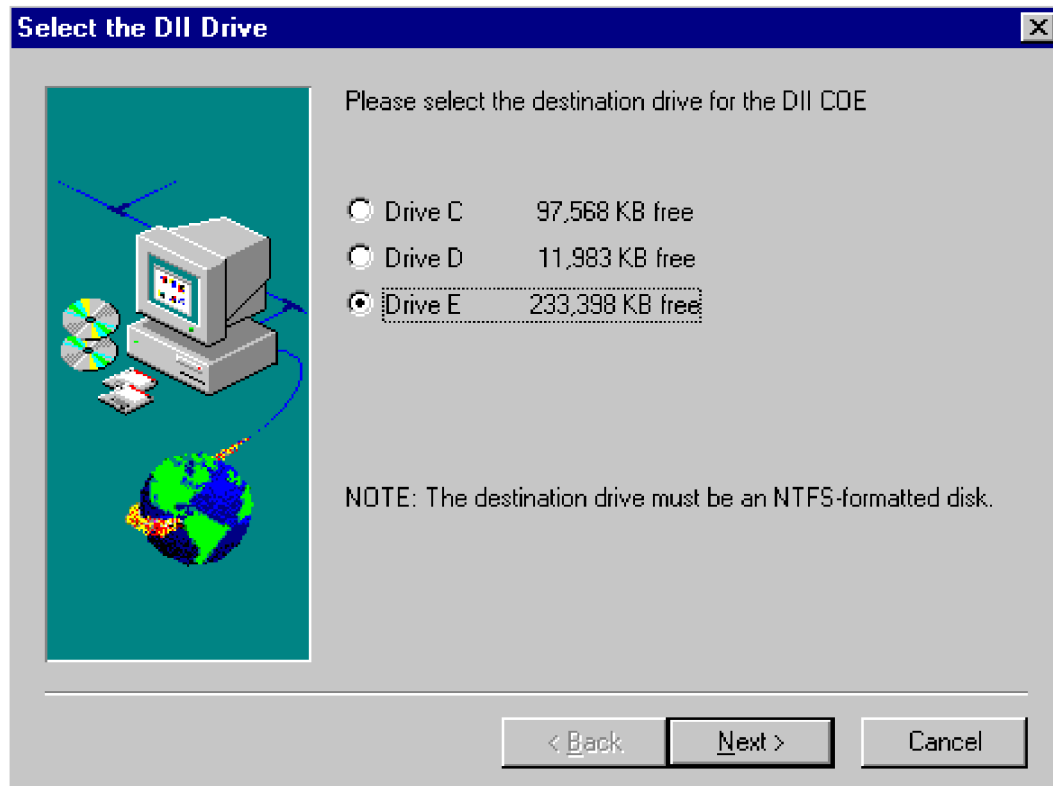


Figure 2. Select the DII Drive Window